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EXAMINER SHAND, ROBERTA A				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/782,291

Applicant(s)

MARQUES, PEDRO R.

Examiner

Roberta A. Shand

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-91 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-91 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 8, 12, 14, 16, 18-21, 24, 25, 29, 31-34, 36 39, 41-43. 46-48, 50, 55-57, 59, 63, 65-67, 72, 75, 78, 81, 84, 87, and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia (U.S. 2005/0175341 A1) in view of Ma (U.S. 6775280 B1).
3. Regarding claim 1, Ovadia teaches a method comprising: defining a flow specification data type for a routing protocol, wherein the flow specification data type allows a variable number of packet flow attributes to be specified (paragraph 170); generating with a routing device a message that encodes information, traffic flow criteria specifying the packet flow in accordance with the flow specification data type (fig. 17); and communicating with the first routing device the message to a second routing device to direct the routing device to control network traffic based on the traffic flow criteria (paragraphs 170-171), wherein the traffic flow criteria comprises source information that identifies a source network device of the packet flow (fig. 11).
4. Ovadia does not teach routing topology information defines at least one route between a first network device and a second network device.
5. Ma teaches (col. 3, lines 40-56) routing topology information (topology criteria) defines at least one route between a first network device and a second network device (fig. 3). It would

have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ovadia to include Ma's topology criteria to provide a high quality of service routing decision.

6. Regarding claims 2, 18, 33, 41, 47, 56, and 65, Ovadia teaches (paragraph 190) defining the flow specification data type as information associated with a route advertised by the message.

7. Regarding claims 3, 19, 34, 42, 48, 57 and 66, Ovadia teaches (paragraph 173) defining a flow specification data type comprises defining the flow specification data type as network layer reachability information (NLRI) that is associated with a route advertised by the message.

8. Regarding claim 4 and 20, Ovadia teaches (paragraph 75 and fig. 7) defining a flow specification data type comprises defining the flow specification type to include a length field that indicates the number of packet flow attributes specified.

9. Regarding claims 5 and 21, Ovadia teaches (fig. 11) the flow specification data type including multiple subcomponents, wherein defining a flow specification data type comprises defining each of the subcomponents to include a subcomponent type (destination and source fields) field and a set of value fields.

10. Regarding claim 6, Ovadia teaches (fig. 11) defining a subcomponent for specifying a destination prefix

11. Regarding claims 8, 25, 36, 43, 50, 59, 67, 72, 75, 78, 81, 84, 87 and 90, Ovadia teaches (paragraph 165) the routing protocol is the **Border Gateway Protocol (BGP)**.

12. Regarding claim 14, Ovadia teaches (fig. 17) the traffic flow criteria specifies an appropriate action that is performed on the network packet.

13. Regarding claim 16, Ovadia teaches a method for distributing traffic flow criteria between network devices, the method comprising: receiving a routing communication that encodes traffic flow criteria specifying the packet flow in accordance with flow specification data type for a routing protocol (fig. 17), wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network (paragraph 170); and controlling network traffic in accordance with the traffic flow criteria (paragraphs 170-171); wherein the traffic flow criteria comprises source information that identifies a source network device of the packet flow (fig. 11).

14. Ovadia does not teach routing topology information defines at least one route between a first network device and a second network device.

15. Ma teaches (col. 3, lines 40-56) routing topology information (topology criteria) defines at least one route between a first network device and a second network device (fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ovadia to include Ma's topology criteria to provide a high quality of service routing decision.

16. Regarding claim 24, Ovadia teaches (paragraph 165) receiving a routing communication comprises communicating with a router in accordance with the routing protocol.

17. Regarding claim 31, Ovadia teaches (paragraph 194) updating a log that includes information about the routing communication.

18. Regarding claim 32, Ovadia teaches a network device comprising: a control unit to generate a message that encodes traffic flow criteria specifying the packet flow in accordance with a flow specification data type (fig. 17), wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network (paragraph 170); and an interface card to communicate the message to a routing device in accordance with a routing protocol (fig. 13 and paragraphs 134-138), wherein the message directs the control unit to apply an appropriate action to network traffic based on the traffic flow criteria (paragraphs 170-171) and wherein the traffic flow criteria comprises source information that identifies a source network device of the packet flow (fig. 11).

19. Ovadia does not teach routing topology information defines at least one route between a first network device and a second network device.

20. Ma teaches (col. 3, lines 40-56) routing topology information (topology criteria) defines at least one route between a first network device and a second network device (fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ovadia to include Ma's topology criteria to provide a high quality of service routing decision.

21. Regarding claim 39, Ovadia teaches a network device comprising: an interface card to receive routing communication that encodes traffic flow criteria specifying the packet flow in accordance with a flow specification data type for a routing protocol (fig. 17), wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network (paragraph 170); and a control unit to compare network traffic to the traffic flow criteria, and apply an appropriate action to the network traffic (paragraphs 170-171; wherein the traffic flow criteria comprises source information that identifies a source network device of the packet flow (fig. 11).

22. Ovadia does not teach routing topology information defines at least one route between a first network device and a second network device.

23. Ma teaches (col. 3, lines 40-56) routing topology information (topology criteria) defines at least one route between a first network device and a second network device (fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ovadia to include Ma's topology criteria to provide a high quality of service routing decision.

24. Regarding claim 46, Ovadia teaches a system comprising: a first network device to generate a message that encodes traffic flow criteria specifying the packet flow in accordance with a flow specification data type (fig.17), and communicate the message to a second routing device via a routing protocol, wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network (paragraph 170); and a second network device to receive the message, compare network traffic to the traffic flow

criteria, and apply an appropriate action to the network traffic based on the traffic flow criteria (fig. 170-171); wherein the traffic flow criteria comprises source information that identifies a source network device of the packet flow (fig. 11).

25. Ovadia does not teach routing topology information defines at least one route between a first network device and a second network device.

26. Ma teaches (col. 3, lines 40-56) routing topology information (topology criteria) defines at least one route between a first network device and a second network device (fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ovadia to include Ma's topology criteria to provide a high quality of service routing decision.

27. Regarding claim 55, Ovadia teaches a computer-readable medium comprising instructions for causing a programmable processor to: define a flow specification data type for a routing protocol, wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network (paragraph 170); generate a message that encodes traffic flow criteria specifying the packet flow in accordance with the flow specification data type (fig. 17); and communicate the message to a routing device to direct the routing device to control network traffic based on the traffic flow criteria (paragraphs 170-171); wherein the traffic flow criteria comprises source information that identifies a source network device of the packet flow (fig. 11).

28. Ovadia does not teach routing topology information defines at least one route between a first network device and a second network device.

29. Ma teaches (col. 3, lines 40-56) routing topology information (topology criteria) defines at least one route between a first network device and a second network device (fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ovadia to include Ma's topology criteria to provide a high quality of service routing decision.

30. Regarding claim 63, Ovadia teaches a computer-readable medium comprising instructions for causing a programmable processor to: receive a routing communication that encodes traffic flow criteria specifying the packet flow in accordance with a flow specification data type for a routing protocol (fig. 17), wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network (paragraph 170); and control network traffic in accordance with the traffic flow criteria (paragraphs 170-171), wherein the traffic flow criteria comprises source information that identifies a source network device of the packet flow (fig. 11).

31. Ovadia does not teach routing topology information defines at least one route between a first network device and a second network device.

32. Ma teaches (col. 3, lines 40-56) routing topology information (topology criteria) defines at least one route between a first network device and a second network device (fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ovadia to include Ma's topology criteria to provide a high quality of service routing decision.

33. Claims 7, 11, 12, 15, 17, 22, 23, 28, 29, 35, 38, 40, 45, 49, 52, 54, 58, 62, 64, 70, 73, 76, 79, 82, 85, 88 and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia in view of Ma and further in view of Bays (U.S. 7139242 B2).

34. Regarding claims 7, 35, 49, and 58, Ovadia and Ma teach defining subcomponents for specifying a destination prefix (fig. 11), a source prefix (fig.11), a protocol (type), a source port (paragraph 121), a destination port (paragraph 121), and a packet length (fig. 17, 1704).

35. Ovadia and Ma do not teach ICMP type.

36. Bays teaches (col. 20, line 64 – col. 21, line 16) defining subcomponents for specifying an ICMP type, and a packet length. It would have been obvious to one of ordinary skill in the art to modify Ovadia and Ma to include Bays ICMP type to respond to errors.

37. Regarding claims 11, 28, 38, 45, 54, 62, 70, 73, 76, 79, 82, 85, 88 and 91, Bays teaches (col. 7, lines 31-64) assigning an application-specific identifier to the flow specification data type to direct the router to install the traffic flow criteria within an independent routing information base (RIB).

38. Regarding claims 12 and 29, Bays teaches (col. 7, lines 31-64) assigning an application-specific identifier (IP address) to the flow specification data type; and configuring a policy to selectively enable distribution of the traffic flow criteria based on the application-specific identifier.

39. Regarding claims 15, 17, 22 40, 52 and 64, Bays teaches (fig. 9A) the appropriate action includes one of load balancing (load sharing), rate limiting, and filtering.

40. Regarding claim 23, Bays teaches (fig. 6A) the routing communication further specifies a route to a network destination, the method further comprising: comparing the specified route to a routing information base (508); and rejecting the traffic flow criteria based on the comparison when the route does not specify a preferred path to the network destination (514).

41. Claims 13 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia in view of Ma and further in view of Rekhter (U.S. 6339595 B1).

42. Regarding claims 13 and 30, Ovadia and Ma teach all of the limitations of claim 12.

43. Ovadia and Ma do not teach assigning an application-specific identifier comprises assigning an Address Family Identifier (AFI) and Subsequent Address Family Identifier (SAFI) to the flow specification data type.

44. Rekhter teaches (col. 58, lines 21-30) assigning an application-specific identifier comprises assigning an Address Family Identifier (AFI) and Subsequent Address Family Identifier (SAFI) to the flow specification data type. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ovadia and Ma to include Rekhter's address family identifiers to identify the Network Layer Protocol.

45. Claims 9, 10, 26, 27, 37, 44, 51, 53, 60, 61, 68, 69, 71, 74, 77, 80, 83, 86 and 89, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovadia (U.S. 2005/0175341 A1) in view of Ma (U.S. 6775280 B1) and further in view of Larson (U.S. 2003/0076248 A1).

46. Regarding claims 9, 26, 37, 51, 60, 68, and 71, Ovadia and Ma teach all of the limitations of claim 1.

47. Ovadia and Ma do not teach redefining a preexisting data type of the routing protocol to define the flow specification data type.

48. Larson teaches (paragraph 41) redefining a preexisting data type of the routing protocol to define the flow specification data type (translation from binary to hexadecimal). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ovadia and Ma to include Larson's translation for less data manipulation.

49. Regarding claims 10, 27, 44, 53, 61, 69, 74, 77, 80, 83, 86 and 89, Larson teaches (abstract) defining a flow specification data type comprises defining the flow specification data type as an application-specific data type in accordance with the routing protocol.

Response to Arguments

50. Applicant's arguments with respect to claims 1-91 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

51. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

52. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

53. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERTA A. SHAND whose telephone number is (571)272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.

54. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

55. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Roberta A. Shand
/R. A. S./
Examiner, Art Unit 2416

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Supervisory Patent Examiner, Art Unit 2416